REMARKS

Claims 2-5 and 8-10 are pending. The claims are believed to be in condition for allowance.

Interview Summary

Applicant gratefully acknowledges the courtesy shown by the Examiner and her supervisor towards the Applicants' undersigned representative during a personal interview on March 30, 2005. During the interview the currently pending claims and Hansen et al., U.S. Pat. No. 6,521,087, were discussed. No agreement was reached.

§ 102(e) Rejection

Claims 2-5 and 8-10 were rejected under 35 U.S.C. § 102(e) as being anticipated by Hansen et al., U.S. Pat. No. 6,521,087. Applicants respectfully traverse this rejection.

Independent claim 4 is directed to a superabsorbent material with odor control which contains a non-acidic compound selected from acid anhydrides, lactides, lactones and hydrolysable esters. The non-acidic compound is present in an amount of 1-20 wt.% with respect to the weight of the superabsorbent material. Independent claim 9 is directed to a hygiene product with odor control comprising a superabsorbent material containing a non-acidic compound selected from acid anhydrides, lactides, lactones and hydrolysable esters. The non-acidic compound is present in an amount of 1-20 wt.% with respect to the weight of the superabsorbent material.

Hansen et al. describes a material with fibers, a binder and particles. More specifically, Hansen et al. is directed to polymeric and non-polymeric binders for particles and the use of such binders in binding particles to fibers. *Column 1, lines 34-36.* The fibers are described in detail at least in columns 11 and 12. The binders are described in detail at least in columns 21-31. The particles are described in detail at least in columns 12-21. The particle characteristics are described under the heading "III. Particle Characteristics." *See Column 12, line 58.* Superabsorbent particles are described under the

heading "IV. Superabsorbent Particles." *See Column 15, line 20.* Other particles are described under the heading "V. Other Particles." *See Column 15 line 61.* This "Other Particles" section contains two listings of particles for binding, water-insoluble particles and water-soluble particles, Table I and Table II, respectively. Hansen et al. describes the particulates in Table II as water-soluble particles that are capable of forming hydrogen bonds or coordinate covalent bonds and are suitable for use with the binders described in Hansen et al. *Column 18, lines 13-17.* Hansen et al. further notes that "the particles listed in Table II have chemical properties that make them suitable for binding to fibers with the binders of the present invention." *Column 20, lines 40-42.* Gluconolactone is listed in Table II as a particle which is suitable for binding to fibers with the binders of Hansen et al.

Hansen et al. is directed to providing a binder which can adhere particles to fibers. The teachings regarding superabsorbent material are directed to particles which may be adhered to fibers through the use of particular binders. Hansen et al. does not disclose any superabsorbent with particular properties such as odor control. As described in the present application and defined in the claims as amended, it has been found that a superabsorbent material with improved odor control can be produced by incorporating in or combining with the superabsorbent material a non-acidic compound selected from acid anhydrides, lactides, lactones and hydrolysable esters. The amount to be incorporated in or to be combined with the superabsorbent material can be 1-20% by weight. *Specification, paragraphs [0004] and [0006].*

Superabsorbent particles and gluconolactone particles are disclosed in separate portions of Hansen et al. as particles suitable for use with binders for binding to fibers. *Column 6, lines 36-38, 54-56 and Column 19, Table II.* However, there is no description in Hansen et al. of gluconolactone particles and superabsorbent particles being both, simultaneously, bonded to fibers to form a superabsorbent material with odor control, and, in particular, there is no disclosure wherein the gluconolactone is present in an amount of 1-20 wt.% with respect to the weight of the superabsorbent material.

The Examiner has asserted that Hansen et al. does teach a superabsorbent material which contains a gluconolactone at Column 41, lines 3-10, and Column 50, lines 9-24.

As pointed out by the Examiner, Hansen et al. describe that:

> manufacturers of products can add particulates of interest (e.g., superabsorbent particles or fibers; antimicrobial particles, etc.) at the place of manufacture of the end products that incorporate the particles. Also, more than one type of particulate material (including water soluble and water insoluble particles) may be added, if desired. Particles without the required functionality would not be bound in the same manner.

Column 41, lines 3-10.

Further, Hansen et al describe:

> Two different particles, such as antimicrobials in particulate form, may be adhered to the same fiber. In the alternative, each different type of antimicrobial particle or other particle may be adhered separately to different fibers. Also, blends of fibers may be included in absorbent structures such as pad 366. For example, these blends may include fibers with adhered antimicrobial (one or more antimicrobials) particles and adhered superabsorbent particles; fibers with one or more antimicrobial particles without superabsorbent particles blended with fibers having adhered superabsorbent particles with or without antimicrobial particles; and combinations of such fibers with untreated fibers and/or binder coated fibers without superabsorbent particles or antimicrobial particles. In addition, other particles, such as anticoagulants or hemostatics may be attached to the fibers.

Column 50, lines 9-24.

However, Hansen et al. never specifically discloses combining the superabsorbent (superabsorbent particles bonded to fibers) with gluconolactone (gluconolactone particles bonded to fibers). Accordingly, a rejection under 35 U.S.C. § 102(e) is improper and should be withdrawn. Furthermore, it is an unrealistic and unreasonable interpretation of these isolated disclosures to assert that Hansen et al. teaches a superabsorbent material which contains gluconolactone in an amount of 1-20 wt.%.

First, there is no teaching of combining gluconolactone particles, specifically, or even all Table II particles, generically, with superabsorbent particles. What is disclosed is superabsorbent particles bonded to fibers in combination with antimicrobial particles. Only these are taught to be combined together, not gluconolactone and superabsorbent particles. Going

through Hansen et al., the antimicrobial particles include particles such as Carbadox (Table I), Chloramphenacol (Table I), Azidoamphenical (Table II), blasticidin (Table II), chlorhexidin (Column 17, line 60), and zeolites with silver salts (Column 9, lines 58-60). There is no disclosure or suggestion of the combination as currently claimed.

Beyond not teaching the claimed combination, Hansen et al. provide no clue about when or how to add gluconolactone particles to make a superabsorbent material containing gluconolatone. Table II mentions about 140 items starting with letter A running to letter M (items N-Z apparently not being suitable). This list of items is not a disclosure of a specific item being added, and, moreover, is not a disclosure of a specific item being combined with a superabsorbent particle. Apart from a choice from 140 or so items having to be made, a person skilled in the art is completely left in the dark by Hansen et al. about how to make a superabsorbent material containing gluconolactone. Neither the description, the examples, nor the claims give any clue as to when or how to add gluconolactone to make a superabsorbent material containing gluconolatone.

In fact, because the Table II particles (of which gluconolactone is one) are water-soluble, Hansen et al. recognizes the difficulty in selecting a binder that allows the particulates to retain their particulate form. *See Column 20, lines 40-65.* According to Hansen et al., a binder is preferably selected so that particles are sparingly soluble in the binder. *Column 20, lines 62-63.* However, no teaching or examples are provided which provide any help in making the presently claimed superabsorbent material containing gluconolactone.

With regard to the hygiene product claimed in claims 8-10, the above-cited disclosure from Column 50, lines 9-24, of Hansen et al. is describing a wound dressing. However, in the paragraphs which follow that disclosure disposable diapers are discussed and there is no mention of the combination of antimicrobial/ superabsorbent material and fibers. Thus, a person skilled in the art that is completely left in the dark by Hansen et al. about how to make a superabsorbent material containing gluconolactone must start from a wound dressing and extrapolate to a hygiene product.

The Examiner further asserts that with respect to claims 4 and 9, Hansen et al discloses gluconolactone that is present in an amount of 1-20 wt.% with respect to the weight of the superabsorbent material. Specifically asserting that Hansen et al. discloses the non-acidic compound is present in the weight percent of 0.5-80% of the total weight of the fibers and superabsorbent material and that Hansen et al. further discloses the superabsorbent material is 3-80% by weight of the fibers and particulate material. *Office Action mailed December 13, 2004, page 2.* However, this does not teach that a non-acidic compound as defined in the claims is present in an amount of 1-20 wt.% with respect to the weight of the superabsorbent material. First, Hansen et al. discloses that particles are present in the weight percentage of "0.05 to 80% of the total weight of the fibrous material and particles." Column 20, line 67 – Column 21, line 2 (emphasis added). Also, the superabsorbent particles are present in an amount of 3-80% of the fibrous materials and particles. *Column 21, lines 3-5.* Thus, Hansen et al. discloses that "particles" can actually be present in an amount of 0.0625% to 2667%[1] wt.% with respect to the weight of the superabsorbent material. This clearly provides no guidance for the claimed range of 1-20 wt.%. Moreover, this disclosure is for particles in general. Hansen et al. provides no teaching about superabsorbent material which contains a non-acidic compound as defined in the claims, let alone a teaching of a range of 1-20 wt.% for the specific particles. Given the lack of disclosure in Hansen et al. of superabsorbent material which contains a non-acidic compound as defined in the claims, the broad ranges given in Hansen et al. for particles generally are not relevant to the superabsorbent materials and hygiene products of the rejected claims.

As demonstrated above, Hansen et al. never specifically discloses combining gluconolactone (gluconolactone particles bonded to fibers) with superabsorbent fibers (superabsorbent particles bonded to fibers). Additionally, Hansen et al. does not teach or suggest how to make such a combination. Moreover, Hansen et al. does not teach or suggest the combination wherein a specifically claimed non-acidic, alkali-neutralizing

[1] (0.05%/80% * 100%) to (80%/3% * 100%)

compound is present in an amount of 1-20 wt.% with respect to the weight of a superabsorbent material.

Prior to the current invention, there was a problem in the art relating to superabsorbent materials in which urine components caused superabsorbent materials to become objectionable long before their maximum absorbing capacity had been used. As the malodorous compounds are often alkaline, it had been proposed to improve odor control by adding acids to the superabsorbent material. However, the use of acids led to skin irritation. The present inventors discovered that the specifically claimed non-acidic, alkali-neutralizing compounds could be used with superabsorbent material to improve odor control. To suggest that Hansen et al. teaches or suggests the presently claimed invention demonstrates a reliance on impermissible hindsight afforded by the claimed invention.

That is, there is no motivation provided to one skilled in the art to select gluconolactone from the over 140 particles listed in Table II and combine it with superabsorbent material. The mere fact that reference teachings can be combined or modified does not render the resultant combination obvious unless the prior art also suggest the desirability of the combination. *In re Mills*, 916 F.2d 680 (Fed. Cir. 1990). Hansen et al. does not suggest the desirability of the combination. Hansen et al. does not recognize the need to improve odor control of superabsorbent material nor that the specifically claimed non-acidic, alkali neutralizing compounds could improve odor control while limiting skin irritation.

In fact, when Hansen et al. is considered as a whole, it leads away from such a combination. Hansen et al. teach that gluconolactone is a cleaner. *See Table II*. One skilled in the art reviewing Hansen et al. would not be led to combine gluconolactone (gluconolactone particles bonded to fibers) with superabsorbent fibers (superabsorbent particles bonded to fibers) in order to improve odor control. Nor, would one skilled in the art review Hansen et al. be motivated to combine gluconolactone (gluconolactone particles bonded to fibers) with superabsorbent fibers (superabsorbent particles bonded to fibers) at all.

For at least the foregoing reasons, Hansen does not anticipate or render obvious the invention as defined in claims 2-5 and 8-10. Therefore, Applicants respectfully request that the rejection of claims 2-5 and 8-10 under 35 U.S.C. § 102(e) as being anticipated by Hansen et al., be withdrawn.

Applicants believe they have responded to all matters raised in the above referenced Office Action and that the application is now in condition for allowance. If the Examiner has any questions concerning this Application or this Reply and Amendment, the Examiner is invited to contact the undersigned.

Respectfully submitted,

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